



# Thermistor Expansion Module Purchasing Guide (Revision B)

## **Main Components:**

- Thermistor Expansion Module (Revision B)

## **Wiring Harnesses & Thermistors**

- Power & Communication Harness (included with thermistor expansion module)
- Thermistor harness (6ft and 12ft lengths) - necessary for wiring in thermistors
- Thermistors (0.2 meter, 1 meter lead length options)

## **Installation Tools:**

- CANdapter

## **Compatibility List:**

- Orion BMS units
- Orion JR BMS units (interfaces via analog outputs)

The thermistor expansion module is used to increase the number of thermistors that the Orion BMS can measure. Each thermal expansion module can monitor up to 80 thermistors. Up to 10 thermistor expansion modules can be added to a single Orion BMS unit to measure up to 800 temperatures.

**Note:** The older style revision A units with the metal enclosure are available as special order items. Minimum order quantity and lead times apply to revision A units. Please inquire for more information.

## Main Thermistor Expansion Module



*Part number OXTHERM80 Pictured (revision B)*

The main thermistor expansion module supports up to 80 thermistors per module. Each module has 4 connectors for thermistors supporting 20 thermistors each.

When purchased, the module comes with one 6 foot length pre-wired power and communication harness included as pictured below (part number CWHTHEXPO2.)



*Part number CWHTHEXPO2 Pictured (for rev B unit)*

Thermistors connect to the expansion module through the 4 thermistor connectors on the module. Pre-wired harnesses are available to make the connection of thermistors simpler. The following parts are available:

CWHTHEX202 - 6 foot length, supports up to 20 thermistors - thermistors not included

CWHTHEX203 - 12 foot length, supports up to 20 thermistors - thermistors not included

These cables are blunt cut on one end and can be cut to the desired length before being connected to thermistors. Use 4 of these cables for 80 thermistors.



*Part number CWHTHEX202 pictured (6ft length - for rev B unit)*

## Thermistors



*The above picture shows a 1 meter (top) and 0.2 meter (bottom) thermistor.*

Thermistors are sold separately from wiring harnesses. We have two standard offerings for thermistors, but other thermistors may be used. The thermistor expansion module can be used with any 10K thermistor, though the correct B value must be programmed into the expansion module. Modules supporting 100K thermistors are available as special order items, but minimum order size and lead times apply.

	<b>Individual Wiring Harness and Thermistor Options</b>
OXTHERM80	Thermistor Expansion Module itself (includes CWHTEXPO2 power harness)
CRMPH2	Complete set of crimps and connectors for Rev B Thermistor Expansion
CWHTEXPO2	Power Harness for Thermistor Expansion Module Rev B - Included with OXMTHERM80
CWHTEX202	6ft harness for Thermistor Expansion Module Rev B - Supports 20 Thermistors, sold separately
CWHTEX203	12ft harness for Thermistor Expansion Module Rev B - Supports 20 Thermistors, sold separately
THERM2002	0.2 meter length thermistor - 20 thermistor pack
THERM201	1 meter length thermistor - 20 thermistor pack
THERM101	1 meter length thermistor - 10 thermistor pack

## Kit Part Numbers

The part numbers below on the left can be used to simplify ordering standard kits. The kit part numbers include the items shown on the right.

OXM THERM80	Thermistor Expansion Module - Crimps and Connectors for 80 Thermistors - No thermistors or thermistor harnesses included (power harness is included.)	OXM THERM80 + CWH T H E X P O 2
OXM THERMP20	Thermistor Expansion Module - For 20 thermistors (6ft harness) - thermistors not included	OXM THERM80 + CWH T H E X P O 2 + 1x CWH T H E X 20 2
OXM THERMP40	Thermistor Expansion Module - For 40 thermistors (6ft harness) - thermistors not included	OXM THERM80 + CWH T H E X P O 2 + 2x CWH T H E X 20 2
OXM THERMP60	Thermistor Expansion Module - For 60 thermistors (6ft harness) - thermistors not included	OXM THERM80 + CWH T H E X P O 2 + 3x CWH T H E X 20 2
OXM THERMP80	Thermistor Expansion Module - For 80 thermistors (6ft harness) - thermistors not included	OXM THERM80 + CWH T H E X P O 2 + 4x CWH T H E X 20 2
OXM THERMP2002	Thermistor Expansion Module - For 20 thermistors (6ft harness) - 0.2 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 1x CWH T H E X 20 2 + 1x THERM202
OXM THERMP4002	Thermistor Expansion Module - For 40 thermistors (6ft harness) - 0.2 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 2x CWH T H E X 20 2 + 2x THERM202
OXM THERMP6002	Thermistor Expansion Module - For 60 thermistors (6ft harness) - 0.2 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 3x CWH T H E X 20 2 + 3x THERM202
OXM THERMP8002	Thermistor Expansion Module - For 80 thermistors (6ft harness) - 0.2 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 4x CWH T H E X 20 2 + 4x THERM202
OXM THERMP201	Thermistor Expansion Module - For 20 thermistors (6ft harness) - 1 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 1x CWH T H E X 20 2 + 1x THERM201
OXM THERMP401	Thermistor Expansion Module - For 40 thermistors (6ft harness) - 1 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 2x CWH T H E X 20 2 + 2x THERM201
OXM THERMP601	Thermistor Expansion Module - For 60 thermistors (6ft harness) - 1 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 3x CWH T H E X 20 2 + 3x THERM201
OXM THERMP801	Thermistor Expansion Module - For 80 thermistors (6ft harness) - 1 meter thermistors included	OXM THERM80 + CWH T H E X P O 2 + 4x CWH T H E X 20 2 + 4x THERM201

*All part numbers above for revision B units and harnesses*

## Tools

**CANdapter** - The CANdapter is a CAN to USB adapter that is necessary for programming the thermistor expansion module. The CANdapter is a tool that is used during the installation and setup of the device and is not installed with the device.



*Part number CANDAPTER is pictured above*